

Hyun-Woo Lee

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Large damping-like spin-orbit torque in a ferromagnet/topological insulator bilayer from localized interfacial states. Journal of the Korean Physical Society, 2022, 80, 241-246.	0.3	0
2	Spin-Orbit Torque Switching in an All-Van der Waals Heterostructure. Advanced Materials, 2022, 34, e2101730.	11.1	68
3	Orientational dependence of intrinsic orbital and spin Hall effects in hcp structure materials. Physical Review B, 2022, 105, .	1.1	2
4	Slater-Pauling behavior of interfacial magnetic properties of $3d/4d/5d$ transition metal alloy/Pt structures. Physical Review B, 2022, 105, .	1.1	2
5	Orbital Dynamics in Centrosymmetric Systems. Physical Review Letters, 2022, 128, 176601.	2.9	12
6	Chiral anomaly in noncentrosymmetric systems induced by spin-orbit coupling. Physical Review B, 2022, 105, .	1.1	2
7	In-plane optical phonon modes of current-carrying graphene. Physical Review B, 2022, 105, .	1.1	2
8	Gigantic Current Control of Coercive Field and Magnetic Memory Based on Nanometer-Thin Ferromagnetic van der Waals Fe_3GeTe_2 . Advanced Materials, 2021, 33, e2004110.	11.1	58
9	Nontrivial torque generation by orbital angular momentum injection in ferromagnetic-metal/ Cu_2O trilayers. Physical Review B, 2021, 103, .	1.1	2
10	Spin-memory loss induced by bulk spin-orbit coupling at ferromagnet/heavy-metal interfaces. Applied Physics Letters, 2021, 118, .	1.5	6
11	Interfacial spin-flip-generated charge pumping. Physical Review Research, 2021, 3, .	1.3	2
12	Orbital Rashba effect in a surface-oxidized Cu film. Physical Review B, 2021, 103, .	1.1	47
13	Green's function approach to adiabatic charge-pumping induced by interfacial spin-flip potential. Journal of the Korean Physical Society, 2021, 78, 1215-1220.	0.3	2
14	Orbitronics: Orbital currents in solids. Europhysics Letters, 2021, 135, 37001.	0.7	77
15	Highly Efficient Nonvolatile Magnetization Switching and Multi-Level States by Current in Single Van der Waals Topological Ferromagnet Fe_3GeTe_2 . Advanced Functional Materials, 2021, 31, 2105992.	7.8	19
16	Ferromagnetic Materials: Gigantic Current Control of Coercive Field and Magnetic Memory Based on Nanometer-Thin Ferromagnetic van der Waals Fe_3GeTe_2 (Adv. Mater. 4/2021). Advanced Materials, 2021, 33, 2170029.	11.1	1
17	Unidirectional spin Hall magnetoresistance in epitaxial Cr/Fe bilayer from electron-magnon scattering. Communications Physics, 2021, 4, .	2.0	7
18	Orbital torque in magnetic bilayers. Nature Communications, 2021, 12, 6710.	5.8	69

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19	Negative intrinsic orbital Hall effect in group XIV materials. <i>Physical Review B</i> , 2021, 104, .	1.1	7
20	Coherent spin waves driven by optical spin-orbit torque. <i>Physical Review B</i> , 2020, 102, .	1.1	6
21	Optical spin-orbit torque in heavy metal-ferromagnet heterostructures. <i>Nature Communications</i> , 2020, 11, 1482.	5.8	26
22	Interfacial atomic layers for full emergence of interfacial Dzyaloshinskii-Moriya interaction. <i>NPG Asia Materials</i> , 2020, 12, .	3.8	7
23	Numerical computation of spin-transfer torques for antiferromagnetic domain walls. <i>Physical Review B</i> , 2020, 101, .	1.1	9
24	Orbital torque: Torque generation by orbital current injection. <i>Physical Review Research</i> , 2020, 2, .	1.3	99
25	Theory of current-induced angular momentum transfer dynamics in spin-orbit coupled systems. <i>Physical Review Research</i> , 2020, 2, .	1.3	65
26	Strain Engineering of the Berry Curvature Dipole and Valley Magnetization in Monolayer MoS_2 . <i>Physical Review Letters</i> , 2019, 123, 036806.	2.9	108
27	Gate-tunable giant nonreciprocal charge transport in noncentrosymmetric oxide interfaces. <i>Nature Communications</i> , 2019, 10, 4510.	5.8	44
28	Enhanced perpendicular magnetocrystalline anisotropy energy in an artificial magnetic material with bulk spin-momentum coupling. <i>Physical Review B</i> , 2019, 99, .	1.1	16
29	Possible contribution of high-energy magnons to unidirectional magnetoresistance in metallic bilayers. <i>Applied Physics Express</i> , 2019, 12, 063001.	1.1	16
30	Unidirectional Magnon-Driven Domain Wall Motion Due to the Interfacial Dzyaloshinskii-Moriya Interaction. <i>Physical Review Letters</i> , 2019, 122, 147202.	2.9	10
31	Spin-orbit torque from spin-flipping scattering at ferromagnetic metal/topological insulator interface. <i>Current Applied Physics</i> , 2019, 19, 241-245.	1.1	1
32	Intrinsic spin-orbit torque in an antiferromagnet with a weakly noncollinear spin configuration. <i>Physical Review B</i> , 2018, 97, .	1.1	3
33	Roles of chiral renormalization on magnetization dynamics in chiral magnets. <i>Physical Review B</i> , 2018, 97, .	1.1	10
34	Spin-orbit-torque-induced skyrmion dynamics for different types of spin-orbit coupling. <i>Journal of Magnetism and Magnetic Materials</i> , 2018, 455, 14-18.	1.0	11
35	Nonreciprocal spin waves in a chiral antiferromagnet without the Dzyaloshinskii-Moriya interaction. <i>Physical Review B</i> , 2018, 98, .	1.1	16
36	Spin-orbit-stable type-II nodal line band crossing in MoX_2 -doped monolayer.		

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37	Gigantic intrinsic orbital Hall effects in weakly spin-orbit coupled metals. Physical Review B, 2018, 98, .	1.1	107
38	Theory of Large Intrinsic Spin Hall Effect in Iridate Semimetals. Scientific Reports, 2018, 8, 8052.	1.6	39
39	Electro-optics of current-carrying graphene. Physical Review B, 2018, 98, .	1.1	7
40	Intrinsic Spin and Orbital Hall Effects from Orbital Texture. Physical Review Letters, 2018, 121, 086602.	2.9	149
41	Berry curvature in monolayer MoS_2 with broken mirror symmetry. Physical Review B, 2018, 97, .		
42	Chiral magnetoresistance in Pt/Co/Pt zigzag wires. Applied Physics Letters, 2017, 110, .	1.5	13
43	Nonlocal Spin Diffusion Driven by Giant Spin Hall Effect at Oxide Heterointerfaces. Nano Letters, 2017, 17, 36-43.	4.5	37
44	Spin-orbit torques from interfacial spin-orbit coupling for various interfaces. Physical Review B, 2017, 96, .	1.1	64
45	Interfacial Rashba magnetoresistance of the two-dimensional electron gas at the $\text{LaAlO}_3/\text{SrTiO}_3$ interface. Physical Review B, 2017, 96, .	1.1	13
46	Spin-wave propagation in the presence of inhomogeneous Dzyaloshinskii-Moriya interactions. Physical Review B, 2017, 96, .	1.1	20
47	Toward surface orbitronics: giant orbital magnetism from the orbital Rashba effect at the surface of sp-metals. Scientific Reports, 2017, 7, 46742.	1.6	67
48	Understanding Spin-orbit Torque, Anomalous Hall Effect, and Spin Hall Effect from the Gauge Transformation. Journal of the Korean Magnetics Society, 2017, 27, 185-189.	0.0	0
49	Field-free switching of perpendicular magnetization through spin-orbit torque in antiferromagnet/ferromagnet/oxide structures. Nature Nanotechnology, 2016, 11, 878-884.	15.6	438
50	k -asymmetric spin splitting at the interface between transition metal ferromagnets and heavy metals. Physical Review B, 2016, 93, .	1.1	48
51	Perpendicular magnetic anisotropy of two-dimensional Rashba ferromagnets. Physical Review B, 2016, 94, .	1.1	30
52	Chiral damping. Nature Materials, 2016, 15, 253-254.	18.3	7
53	Drift-induced modifications to the dynamical polarization of graphene. Physical Review B, 2015, 92, .	1.1	31
54	Tuning Locality of Pair Coherence in Graphene-based Andreev Interferometers. Scientific Reports, 2015, 5, 8715.	1.6	7

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55	Angular dependence of spin-orbit spin-transfer torques. <i>Physical Review B</i> , 2015, 91, .	1.1	63
56	Intrinsic spin torque without spin-orbit coupling. <i>Physical Review B</i> , 2015, 92, .	1.1	16
57	Spin-orbit-torque engineering via oxygen manipulation. <i>Nature Nanotechnology</i> , 2015, 10, 333-338.	15.6	271
58	Effects of Rashba and Dresselhaus spin-orbit interactions on the ground state of two-dimensional localized spins. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 196005.	0.7	7
59	Magnon-mediated Dzyaloshinskii-Moriya torque in homogeneous ferromagnets. <i>Physical Review B</i> , 2014, 90, .	1.1	32
60	Spin Hall torque magnetometry of Dzyaloshinskii domain walls. <i>Physical Review B</i> , 2014, 90, .	1.1	221
61	Current-induced modification of spin wave mode interference. <i>Current Applied Physics</i> , 2014, 14, 182-186.	1.1	0
62	SHE's electric. <i>Nature Physics</i> , 2014, 10, 549-550.	6.5	7
63	Spin-wave-induced domain wall motion in perpendicularly magnetized system. <i>Applied Physics Express</i> , 2014, 7, 033001.	1.1	14
64	Angular and temperature dependence of current induced spin-orbit effective fields in Ta/CoFeB/MgO nanowires. <i>Scientific Reports</i> , 2014, 4, 4491.	1.6	204
65	Self-consistent calculation of spin transport and magnetization dynamics. <i>Physics Reports</i> , 2013, 531, 89-113.	10.3	36
66	Chirality from Interfacial Spin-Orbit Coupling Effects in Magnetic Bilayers. <i>Physical Review Letters</i> , 2013, 111, 216601.	2.9	166
67	Current induced torques and interfacial spin-orbit coupling: Semiclassical modeling. <i>Physical Review B</i> , 2013, 87, .	1.1	420
68	Spin-wave propagation in the presence of interfacial Dzyaloshinskii-Moriya interaction. <i>Physical Review B</i> , 2013, 88, .	1.1	267
69	Orbital chirality and Rashba interaction in magnetic bands. <i>Physical Review B</i> , 2013, 87, .	1.1	78
70	Magnetic-field-controlled reconfigurable semiconductor logic. <i>Nature</i> , 2013, 494, 72-76.	18.7	92
71	Current-driven domain wall motion with spin Hall effect: Reduction of threshold current density. <i>Applied Physics Letters</i> , 2013, 102, 172404.	1.5	19
72	Universal classes of magnetic-field- and electric-current-induced magnetic domain-wall dynamics in one and two dimensional regimes. <i>Current Applied Physics</i> , 2013, 13, 228-236.	1.1	11

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73	The critical role of next-nearest-neighbor interlayer interaction in the magnetic behavior of magnetic/non-magnetic multilayers. <i>New Journal of Physics</i> , 2013, 15, 123025.	1.2	8
74	Current-induced torques and interfacial spin-orbit coupling. <i>Physical Review B</i> , 2013, 88, .	1.1	121
75	Interlayer exchange coupling between next nearest neighbor layers. <i>Physical Review B</i> , 2012, 86, .	1.1	5
76	Visibility recovery by strong interaction in an electronic Mach-Zehnder interferometer. <i>Physical Review B</i> , 2012, 86, .	1.1	5
77	Electrical Detection of Polarity and Chirality of a Magnetic Vortex Using Spin-Motive Force Caused by Rashba Spin-Orbit Coupling. <i>Applied Physics Express</i> , 2012, 5, 123002.	1.1	1
78	Current-induced motion of a transverse magnetic domain wall in the presence of spin Hall effect. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	75
79	Prediction of Giant Spin Motive Force due to Rashba Spin-Orbit Coupling. <i>Physical Review Letters</i> , 2012, 108, 217202.	2.9	90
80	Multi-orbit tight binding calculations for spin transfer torque in magnetic tunneling junctions. <i>Journal of Applied Physics</i> , 2012, 111, 07C904.	1.1	0
81	Magnetization dynamics induced by in-plane currents in ultrathin magnetic nanostructures with Rashba spin-orbit coupling. <i>Physical Review B</i> , 2012, 85, .	1.1	203
82	Rashba spin-orbit coupling effects on a current-induced domain wall motion. <i>Journal of Magnetism and Magnetic Materials</i> , 2012, 324, 1449-1452.	1.0	17
83	Curvature-induced spin-orbit coupling and spin relaxation in a chemically clean single-layer graphene. <i>Physical Review B</i> , 2011, 84, .	1.1	45
84	Magnetic vortex wall motion driven by spin waves. <i>Applied Physics Letters</i> , 2011, 98, .	1.5	40
85	Switching phase diagrams of current-induced magnetization switching in asymmetric MgO-based magnetic tunnel junctions. <i>Journal Physics D: Applied Physics</i> , 2011, 44, 064008.	1.3	4
86	Spin transfer torque and tunneling magnetoresistance dependences on finite bias voltages and insulator barrier energy. <i>Thin Solid Films</i> , 2011, 519, 8247-8251.	0.8	4
87	Electric Current Effect on the Energy Barrier of Magnetic Domain Wall Depinning: Origin of the Quadratic Contribution. <i>Physical Review Letters</i> , 2011, 107, 217205.	2.9	26
88	Effect of spin diffusion on current generated by spin motive force. <i>Physical Review B</i> , 2011, 84, .	1.1	10
89	Magnetic domain-wall motion in a nanowire: Depinning and creep. <i>Physical Review B</i> , 2011, 84, .	1.1	27
90	Universality Classes of Magnetic Domain Wall Motion. <i>Physical Review Letters</i> , 2011, 107, 067201.	2.9	70

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91	Static and dynamic depinning processes of a magnetic domain wall from a pinning potential. <i>Physical Review B</i> , 2011, 84, .	1.1	28
92	Publisher's Note: Magnetic domain wall motion in a nanowire: Depinning and creep [Phys. Rev. B84, 075469 (2011)]. <i>Physical Review B</i> , 2011, 84, .	1.1	1
93	Spin Transfer Torque in Ferromagnet-Normal Metal-Antiferromagnet Junctions. <i>Journal of Magnetism and Magnetic Materials</i> , 2011, 312, 92-96.	0.2	1
94	Perpendicular Spin-transfer Torque in Asymmetric Magnetic Tunnel Junctions: Material Parameter Dependence. <i>Journal of the Korean Magnetic Society</i> , 2011, 21, 52-55.	0.0	0
95	Controllable chirality switching of a moving domain wall by oblique magnetic field. <i>Applied Physics Letters</i> , 2010, 97, 032507.	1.5	11
96	Thermal fluctuation field for current-induced domain wall motion. <i>Physical Review B</i> , 2010, 82, .	1.1	1
97	Suppression of Spin Dephasing in a Two-Dimensional Electron Gas with a Quantum Point Contact. <i>Journal of Magnetism and Magnetic Materials</i> , 2010, 315, 7-11.	0.2	0
98	Electronic interferometer capacitively coupled to a quantum dot. <i>Physical Review B</i> , 2009, 80, .	1.1	3
99	Current-induced domain wall motion: Domain wall velocity fluctuations. <i>Journal of Applied Physics</i> , 2009, 105, .	1.1	12
100	Electrical measurements of the polarization in a moving magnetic vortex. <i>Applied Physics Letters</i> , 2009, 95, 123110.	1.5	28
101	Revival of Electron Coherence in a Quantum Wire of Finite Length. <i>Physical Review Letters</i> , 2009, 102, 076401.	2.9	5
102	Current-Induced Domain-Wall Motion in [CoFe/Pt] ₅ Nanowire With Perpendicular Magnetic Anisotropy. <i>IEEE Transactions on Magnetics</i> , 2009, 45, 3773-3775.	1.2	13
103	Interdimensional universality of dynamic interfaces. <i>Nature</i> , 2009, 458, 740-742.	13.7	127
104	Bias-voltage dependence of perpendicular spin-transfer torque in asymmetric MgO-based magnetic tunnel junctions. <i>Nature Physics</i> , 2009, 5, 898-902.	6.5	193
105	Analytic expression of the temperature increment in a spin transfer torque nanopillar structure. <i>Journal of Magnetism and Magnetic Materials</i> , 2009, 321, 3589-3594.	1.0	14
106	Curvature-enhanced spin-orbit coupling in a carbon nanotube. <i>Physical Review B</i> , 2009, 80, .	1.1	91
107	Flux-dependent transport through an Aharonov-Bohm interferometer with embedded multiple coupled quantum dots. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008, 372, 2073-2078.	0.9	7
108	Nonequilibrium Kondo effect and Andreev reflection through double quantum dots with spin-flip scattering. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008, 372, 6424-6428.	0.9	5

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109	Current-induced domain wall motion in a nanowire with perpendicular magnetic anisotropy. <i>Applied Physics Letters</i> , 2008, 92, 202508.	1.5	185
110	Effect of ferromagnetic contacts on spin accumulation in an all-metallic lateral spin-valve system: Semiclassical spin drift-diffusion equations. <i>Physical Review B</i> , 2008, 78, .	1.1	8
111	Nonequilibrium Dephasing in an Electronic Mach-Zehnder Interferometer. <i>Physical Review Letters</i> , 2008, 100, 196807.	2.9	50
112	Anomalous Velocity Operator in a Multi-Particle Dirac System with Electron-Electron Interactions. <i>Journal of the Korean Physical Society</i> , 2008, 53, 3584-3587.	0.3	1
113	Effects of Nonmagnetic Impurity Scattering in a Ferromagnet with Inhomogeneous Magnetization. <i>Journal of the Korean Physical Society</i> , 2008, 53, 1030-1033.	0.3	0
114	Nonlocal Spin Transport in Lateral Spin Valves with Multiple Ferromagnetic Electrodes. <i>Journal of the Korean Physical Society</i> , 2008, 53, 973-978.	0.3	0
115	Phase Locking in a Nonballistic Multichannel Spin Field-Effect Transistor with an External Magnetic Field. <i>Journal of the Korean Physical Society</i> , 2008, 53, 1020-1023.	0.3	0
116	Current-carrying capacity of double-wall carbon nanotubes. <i>Nanotechnology</i> , 2007, 18, 235201.	1.3	16
117	Superconducting critical temperature and singlet and triplet pair functions of superconductor/normal-metal/ferromagnet trilayers. <i>Physical Review B</i> , 2007, 75, .	1.1	4
118	Correlation-Induced Resonances and Population Switching in a Quantum-Dot Coulomb Valley. <i>Physical Review Letters</i> , 2007, 98, 186805.	2.9	22
119	Andreev reflection with spin-flip scattering through a T-shaped double quantum dot. <i>Journal of Applied Physics</i> , 2007, 101, 103918.	1.1	18
120	Current-Induced Magnetic Domain-Wall Motion by Spin Transfer Torque: Collective Coordinate Approach with Domain-Wall Width Variation. <i>Journal of Magnetism</i> , 2007, 12, 1-6.	0.2	12
121	Branching-induced spin polarization amplification in nonmagnetic semiconductors. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 4313-4316.	0.8	1
122	Spin polarization amplification within nonmagnetic semiconductors at room temperature. <i>Physical Review B</i> , 2006, 73, .	1.1	9
123	Ballistic spin field-effect transistors: Multichannel effects. <i>Physical Review B</i> , 2006, 74, .	1.1	19
124	Transmission zero in a quantum dot with strong electron-electron interaction: Perturbative conductance calculations. <i>Physical Review B</i> , 2006, 73, .	1.1	10
125	Spin-current-induced charge current. <i>Physical Review B</i> , 2005, 71, .	1.1	1
126	Spin relaxation in mesoscopic superconducting Al wires. <i>Physical Review B</i> , 2005, 71, .	1.1	15

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127	Mesoscopic effects in a single-mode Datta-Das spin field-effect transistor. <i>Physical Review B</i> , 2005, 72, .	1.1	6
128	Steady-state solutions of hydrodynamic traffic models. <i>Physical Review E</i> , 2004, 69, 016118.	0.8	39
129	Towards unified understanding of conductance of stretched monatomic contacts. <i>Physical Review B</i> , 2003, 68, .	1.1	12
130	Supersymmetry in carbon nanotubes in a transverse magnetic field. <i>Physical Review B</i> , 2003, 68, .	1.1	48
131	Nonmonotonic Behavior of Resistance in a Superconductorâ€“Luttinger Liquid Junction. <i>Physical Review Letters</i> , 2003, 90, 247001.	2.9	5
132	Evenâ€“odd behavior and quantization of conductance in monovalent atomic contacts. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002, 14, 347-354.	1.3	10
133	Non-Local Transport in a Multi-Wall Carbon Nanotube. <i>Journal of the Physical Society of Japan</i> , 2001, 70, 789-792.	0.7	5
134	Traffic states of a model highway with on-ramp. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000, 281, 78-86.	1.2	34
135	Phase diagram of congested traffic flow: An empirical study. <i>Physical Review E</i> , 2000, 62, 4737-4741.	0.8	57
136	Exactly solvable two-way traffic model with ordered sequential update. <i>Physical Review E</i> , 1999, 60, 6465-6479.	0.8	26
137	Generic Transmission Zeros and In-Phase Resonances in Time-Reversal Symmetric Single Channel Transport. <i>Physical Review Letters</i> , 1999, 82, 2358-2361.	2.9	156
138	Fluctuations of the inverse compressibility in disordered electron systems. <i>Physical Review B</i> , 1999, 59, 2841-2847.	1.1	4
139	Dynamic states of a continuum traffic equation with on-ramp. <i>Physical Review E</i> , 1999, 59, 5101-5111.	0.8	151
140	Origin of Synchronized Traffic Flow on Highways and Its Dynamic Phase Transitions. <i>Physical Review Letters</i> , 1998, 81, 1130-1133.	2.9	202
141	Coherent states of alternating current. <i>Physical Review B</i> , 1997, 56, 6839-6850.	1.1	156
142	Electron counting statistics and coherent states of electric current. <i>Journal of Mathematical Physics</i> , 1996, 37, 4845-4866.	0.5	808
143	Current fluctuations in a single tunnel junction. <i>Physical Review B</i> , 1996, 53, 7383-7391.	1.1	26
144	Universal statistics of transport in disordered conductors. <i>Physical Review B</i> , 1995, 51, 4079-4083.	1.1	105